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SOURCE

Za Ekonomiyu Materialov, No 4, p 96

USSR SCIENTIFIC-TECHNICAL SESSION ON POWDER METALLURGY

A session on powder metallurgy was called in January 1953 by the Committee on Metal Conservation attached to the All-Union Council of Scientific and Technical Societies jointly with VNITO (All-Union Scientific and Technical Society) of Metallurgists. The session discussed recent problems of powder metallurgy and outlined the ways for further development of this branch of metal processing. The following information on Soviet powder metallurgy was presented at the session./

For the past 3 - 4 years, powder metallurgy in the USSR has shown considerable progress. New methods of manufacturing high-quality iron powders were acquired and production of these powders was increased. Technology was developed for making thin-walled bearing liners out of lead bronze of the metalloceramic type, resulting in considerable economy in the comsumption of lead and copper. Also the utilization of ball-bearing steel wastes in high-quality products was achieved, resulting, in many cases in a considerable saving of brass and special steel.

A method was worked out for using the filings of quality steels in the manufacture of welding electrode: Aprlication of iron powder electrodes in electrochemical production has shown that they decrease overvoltage and give a saving in nonferrous metals. The utilization of a colloidal suspension of metals in organic liquids for impregnation of perous bearing sharply increases their service length.

Essential works have been conducted recently in the field of the theory of various processes in powder metallurgy. A great deal was done in developing the theory of sintering, in studying the "graphite-iron"system, in establishing the lateral pressure during compacting, etc. Among the enterprises of ferrous metallurgy, there is a shop for the manufacture of iron-graphite products. This shop has already made hundreds of thousands of bearings, thus saving considerable quantity of alloy steel.

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ţ		While recognizing certain progress in development of the theoretical problems of powder metallurgy and in the practical utilization of results, methods of powder metallurgy into certain branches of induction of the	
	*; • ;	methods of powder metallurgy into certain branches of industry, emphasizing the necessity for accelerating activity in this respect.	
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